4. Monetary and financial conditions

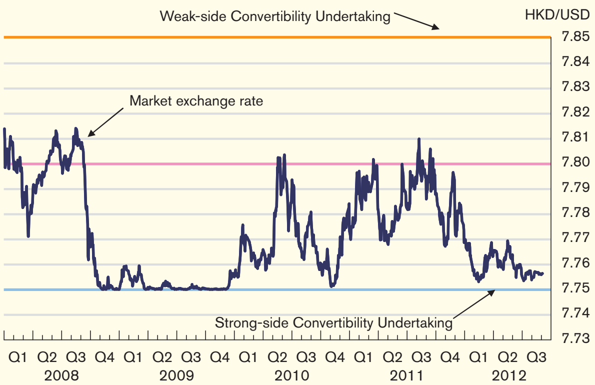
Exchange rate, interest rates and monetary developments

The Hong Kong dollar spot exchange rate moved within a narrow band, and the money market operated in an orderly fashion despite the volatile external environment. Net fund flow pressures on the Hong Kong dollar continued to be muted. Interbank interest rates, retail-level interest rates and the composite interest rate all stayed at low levels. Domestic credit recorded only mild growth amid the slowing domestic economy, and Hong Kong's offshore renminbi business developed further, particularly in respect of renminbi financing activities.

4.1 Exchange rate and interest rates

The Hong Kong dollar-US dollar spot exchange rate has so far traded within a narrow range in 2012, despite the heightened uncertainty surrounding the global macro-financial environment (Chart 4.1). It strengthened slightly during the first two months, reflecting a respite from the euro area crisis and a buoyant local equity market. The spot exchange rate then softened through mid-May with local stock market corrections and renewed concerns over the European sovereign debt crisis and global prospects. Thereafter, bolstered by some signs of progress in addressing the crisis, the rate strengthened to 7.7558 on 31 August, slightly stronger than the level at the end of 2011.

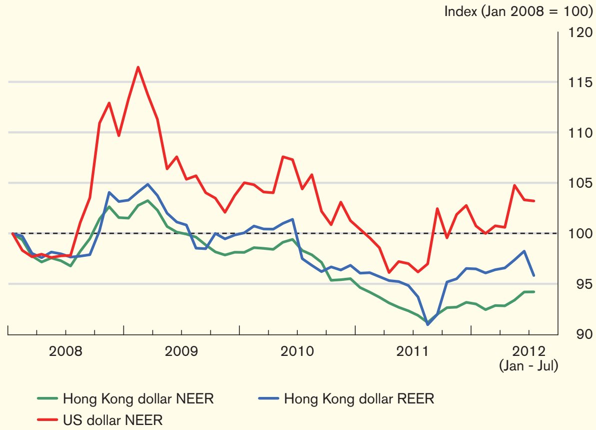
Chart 4.1
Hong Kong dollar exchange rate



Source: HKMA.

The trade-weighted nominal effective exchange rate index of the Hong Kong dollar strengthened by 1.1% during the first half of 2012, as the US dollar appreciated against most major currencies (Chart 4.2). Much of the US dollar appreciation was due to risk-off behaviour and increased capital flows to safe-haven assets, particularly towards the second quarter amid fears of a global slowdown and renewed concerns over the sovereign debt situation in Europe. The real

Chart 4.2
Nominal and real effective exchange rates

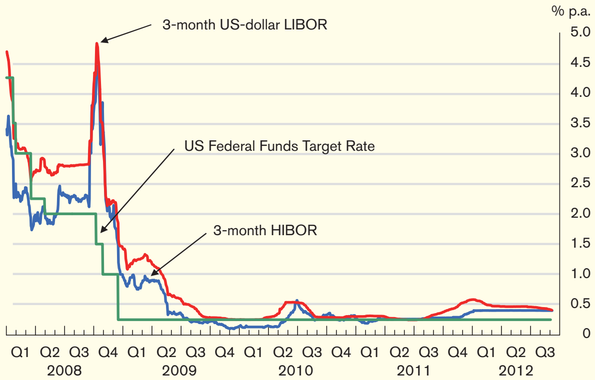


Note: Real effective exchange rate index is seasonally adjusted.
Sources: C&SD, CEIC and HKMA staff estimates.

effective exchange rate index of the Hong Kong dollar strengthened at a slightly faster pace than the nominal effective exchange rate index due to slightly higher inflation in Hong Kong relative to its trading partners.

The low interest rate environment continued in the first half of 2012. With the US Federal Funds Target Rate staying at 0 - 0.25%, the Base Rate under the Discount Window operated by the HKMA was held unchanged at 0.5%. In the money market, Hong Kong dollar interbank offered rates (HIBORs) also remained at low levels (Chart 4.3). The overnight HIBOR fixing edged down early this year and then stayed around 0.11% for the rest of the first half. For maturities of three months and beyond, the interbank rates, however, increased slightly, in tandem with similar movements of the US dollar interbank offered rates (LIBORs).

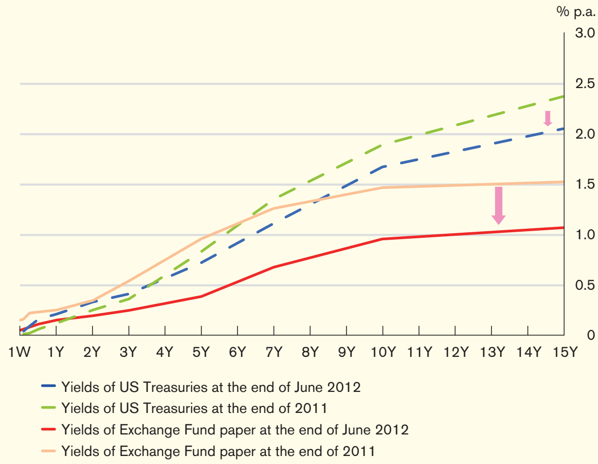
Chart 4.3
Interest rates of the Hong Kong dollar and US dollar



Source: CEIC.

In contrast, the nominal yield curve of Exchange Fund papers shifted downward and flattened across the term structure during the first half (Chart 4.4). This mainly reflected increased demand for high-quality Hong Kong dollar assets and the flattening of the US Treasuries yield curve. However, short-dated Treasuries yields increased as a result of the Maturity Extension Programme (also known as "Operation Twist"). As a result, during the first half, the yield spread between Exchange Funds papers and US Treasuries turned negative for tenors of five years or below, while the prevailing negative spread widened further for other tenors.

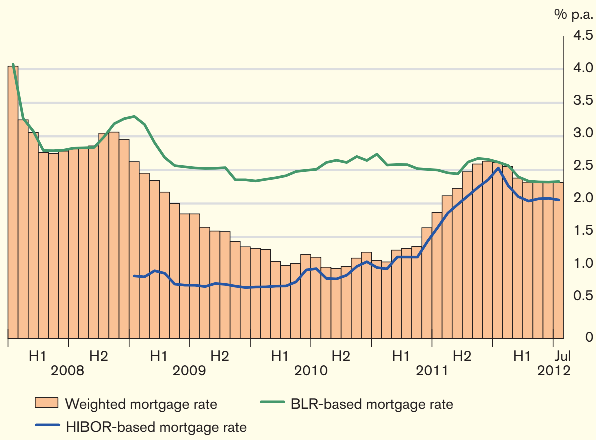
Chart 4.4
Yield curve movements in the first half of 2012



Source: HKMA.

At the retail level, Hong Kong dollar interest rates stayed low and eased back slightly. While the Best Lending Rates (BLR) remained unchanged at 5.00% or 5.25%, the average mortgage interest rate fell by 32 basis points to 2.32% during the first half with the easing in banks' funding costs and a return of keen competition in the mortgage market (Chart 4.5). The weighted deposit rate offered by retail banks decreased by

Chart 4.5
Mortgage interest rates for newly approved loans

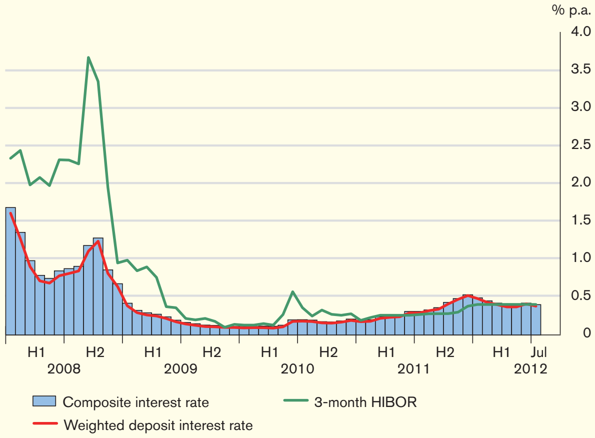


Note: The share of HIBOR-based mortgage plans was small in 2008. All mortgage rates are estimates only.

Source: HKMA staff estimates.

11 basis points to 0.41% (Chart 4.6). The composite interest rate, which reflects the average cost of funds for banks, also declined by 11 basis points to 0.42%.

Chart 4.6
Deposit interest rates and the average cost of funds



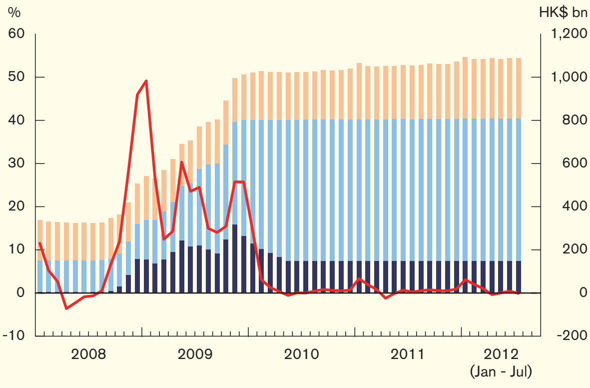
Sources: HKMA and CEIC.

The interest rate environment just described remained broadly unchanged moving into Q3, with the interbank rates, retail-level rates and the composite rate all staying at low levels. This is against the backdrop of the US Federal Reserve's forecast of exceptionally low levels for the federal funds rate at least through mid-2015. As implied by the term structure, the HIBORs and swap rates for future periods will pick up very slowly at least in the next two years. The latest consensus estimates project the three-month HIBOR to stay unchanged over the next 12 months. At the retail level, lending and deposit rates will continue to be affected by changes in the demand for loans and supply of deposits in the banking system.

4.2 Money and credit

During the first half, both monetary aggregates and bank lending grew at a moderating pace. The Monetary Base increased slightly, mainly reflecting a rise in outstanding Certificates of Indebtedness (Chart 4.7). Other Monetary Base components, including the Aggregate Balance, outstanding value of Exchange Fund paper, and the amount of government-issued currency notes and coins in circulation, were little changed.

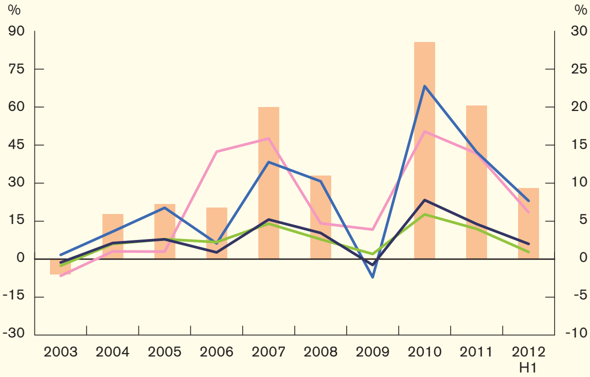
Chart 4.7
Monetary Base components



Source: HKMA.

On the credit side, total loan and advances grew by 4.7% (or an annualised 9.3%) in the first half, much slower than the 20.2% growth for the whole of 2011 (Chart 4.8).[18] Most of the growth was driven by foreign currency loans and loans for use outside Hong Kong. In contrast, Hong

Chart 4.8
Loan growth



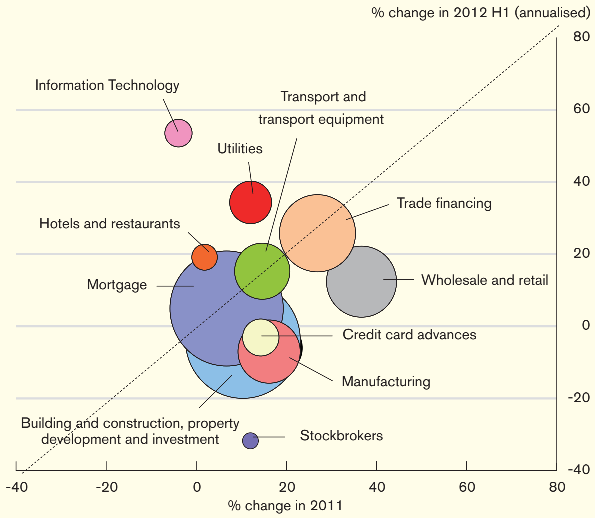
Note: Growth rates in 2012 H1 are annualised.
Source: HKMA.

[18] The annualised rate of change is prorated based on the year-to-June rate.

Kong dollar loans and domestic credit increased slightly by an annualised 2.8% and 6.0% respectively.[19] In addition, if only considering domestic credit originated in local currency, there was just a sluggish annualised growth of 1.0%, much slower than Hong Kong's nominal GDP growth during the period.

Analysed by economic use, most categories of domestic credit recorded only mild growth in the first half (Chart 4.9). A few exceptions were trade financing and loans to the wholesale, retail, hotel and restaurant sectors that recorded double-digit growth. Loans to utilities and the information technology sector also increased at a remarkable pace, likely for financing capital investment. On the other hand, property-related loans were flat overall, despite a rebound in mortgage loans in Q2. Loans for other domestic use were also sluggish. In particular, loans to stockbrokers and financial concerns declined notably amid turbulent financial market developments. Credit card advances edged down, reflecting slowing private consumption.

Chart 4.9
Loans for use in Hong Kong by sector



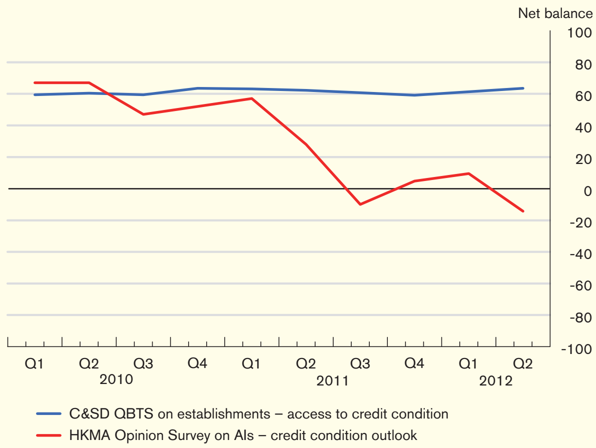
Note: In this bubble chart, the size of the bubble shows the outstanding loan amount to each sector. The 45-degree line divides those sectors showing faster loan growth in 2012 H1 than in 2011.

Source: HKMA.

[19] Domestic credit refers to loans for use in Hong Kong including trade finance originated in any currencies.

It is likely that credit demand will weaken further in the near term amid slow growth in the domestic economy. According to the latest results of the HKMA Opinion Survey on Credit Condition Outlook, 19% of the surveyed AIs expect domestic loan demand to be lower in the next three months, as opposed to 5% who expect demand to be higher. As a result, the net balance (the difference between the proportion of "ups" and that of "downs") turned to a negative 14 in Q2, compared with a positive 10 in Q1 (Chart 4.10). Credit supply, on the other hand, is expected to remain accommodative with the continuation of the low interest rate environment. The latest Quarterly Business Tendency Survey (QBTS) also indicated no signs of deterioration in firms' credit access.

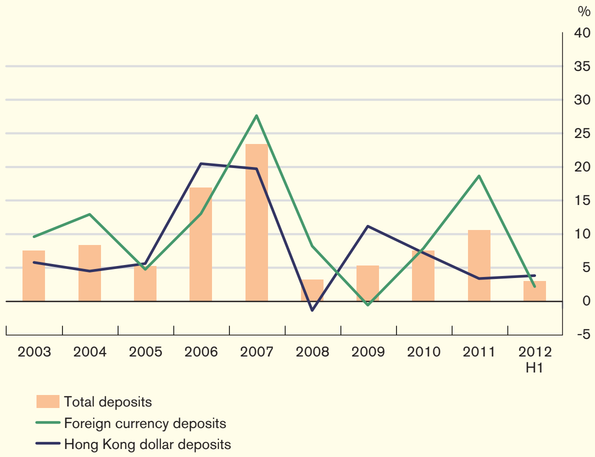
Chart 4.10
Surveys on credit demand and credit access



Sources: HKMA and C&SD.

The Hong Kong dollar monetary aggregates also recorded a modest increase, with M1 (seasonally adjusted) and M3 rising by 5.2% and 2.4% respectively during the first half. Representing the main components of Hong Kong dollar money supply, Hong Kong dollar deposits grew by a modest 1.9% in the first half, with growth occurring entirely in Q1 (Chart 4.11). Demand and savings deposits increased at the expense of the less-liquid time deposits. Foreign currency deposits only recorded a slight increase of 1.1% mainly due to an offset from lower renminbi deposits (to be discussed in greater detail in the next few paragraphs).

Chart 4.11
Deposit growth

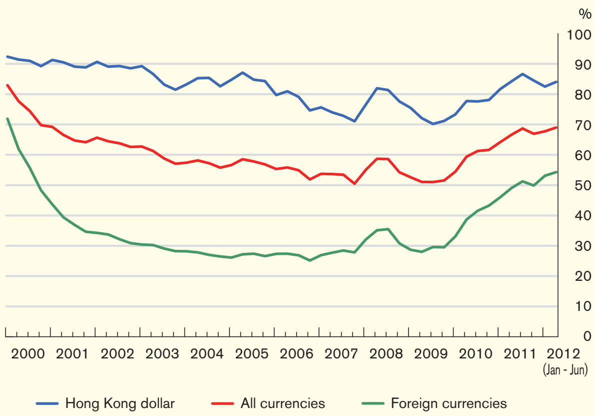


Note: Growth rates in 2012 H1 are annualised.

Source: HKMA.

As total loans increased slightly faster than total deposits for the whole banking sector, the overall loan-to-deposit ratio increased to 69.0% at the end of June 2012 (Chart 4.12). The foreign currency loan-to-deposit ratio increased to 54.3%, but the Hong Kong dollar counterpart edged down slightly to 84.0%.

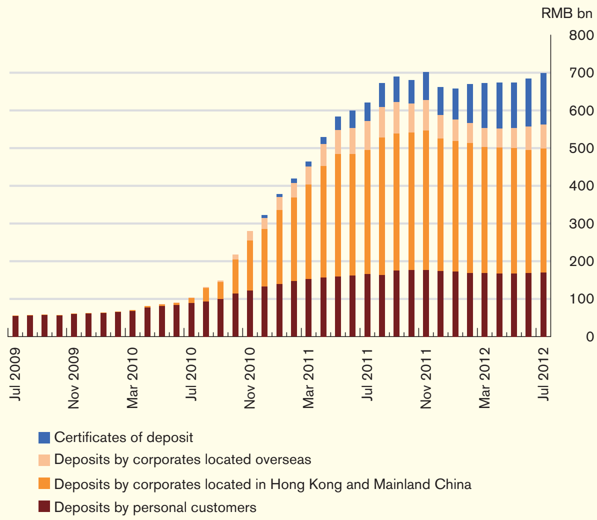
Chart 4.12
Loan-to-deposit ratios



Source: HKMA.

The funding structure of renminbi business in Hong Kong banks has evolved. With more banks deploying the issuance of certificates of deposit (CDs) as a means of tapping renminbi funds, the outstanding amount of renminbi CDs rose by 72.7% from six months ago to RMB126.1 billion at the end of June (Chart 4.13). In view of the diversion to CDs, renminbi deposits dropped by 5.2% to RMB557.7 billion and accounted for 17.5% of total foreign currency deposits in Hong Kong.

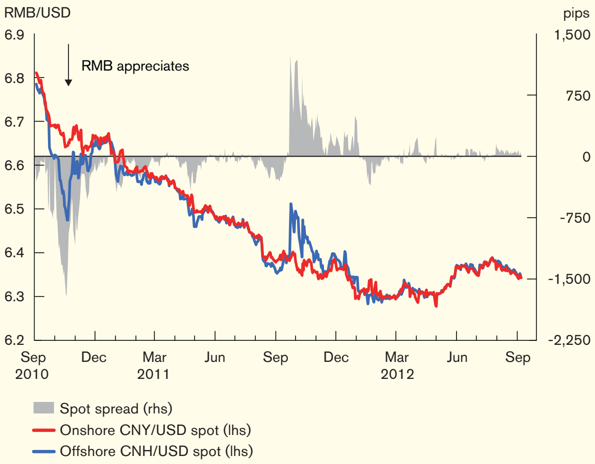
Chart 4.13
Renminbi deposits and outstanding certificates of deposit in Hong Kong



Source: HKMA.

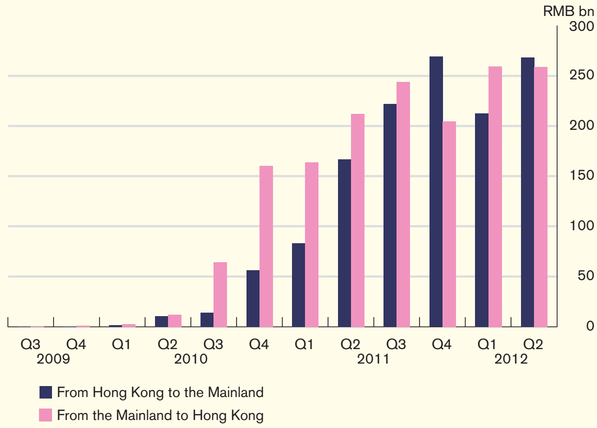
The offshore renminbi exchange rate in Hong Kong (CNH) has so far this year moved broadly in tandem with the onshore exchange rate (CNY) (Chart 4.14), leaving their spreads in a tight and relatively stable range. Both the CNH and CNY weakened until July and then strengthened slightly in the following months. The one-year CNH and CNY deliverable forwards, although not as tightly related, have been on a slight decline, probably reflecting eroding expectations of renminbi appreciation.

Chart 4.14
Onshore and offshore renminbi exchange rates



Source: Bloomberg.

Chart 4.15
Flows of renminbi trade settlement payments



Source: HKMA.

Cross-border use of the renminbi has continued to grow despite lower expectations of renminbi appreciation. Cross-border renminbi trade settlement conducted through Hong Kong banks amounted to RMB1,213.1 billion during the first half, representing a 9.2% increase over the preceding half-year period. While outward renminbi remittances fell relative to inward remittances in Q1, they bounced up again in Q2. As such, the remittance flows were more or less balanced in the first half (Chart 4.15). Renminbi financing activities in Hong Kong continued to be vibrant, with outstanding loans climbing by 73.3% from six months ago to RMB53.4 billion at the end of June 2012. A total of RMB161.3 billion worth of debt securities, including the CDs, were issued in the first half, almost double the RMB85.2 billion recorded during the same period in 2011. The renminbi debt securities market also saw more divesified base of issuers and investors from around the globe.

There are clear indications that banks worldwide are using the robust platform and large liquidity pool of Hong Kong to offer renminbi services to their customers at home. At the end of June 2012, 195 banks were participating in Hong Kong's renminbi clearing platform. Of these, 172 were subsidiaries and branches of overseas banks and overseas presence of Mainland banks. At the same time, some 1,227 renminbi correspondent accounts were maintained by overseas banks with banks in Hong Kong. The amount due to, and due from, such overseas banks amounted to RMB126.5 billion and RMB140.3 billion respectively.

Box 4 studies the determinants of the distribution of offshore deposits among different offshore banking centres and draws lessons for further development of offshore renminbi business in Hong Kong.

Box 3
Gauging the safehavenness of the Hong Kong dollar[20]

Over the past five years, there have been several bouts of financial turbulence, causing sharp changes in risk assessment globally, with international investors fleeing risky assets, such as high-yielding currencies, to safe havens (for example, US Treasury securities, gold and the Japanese yen). Every time this happened, the resulting capital flows were enormous, as reflected in the large swings in the foreign exchange market.

This box assesses the safehavenness of currencies with the aim of providing a better understanding of how capital flow tends to react to a sharp increase in global risk aversion in times of financial crisis. It focuses on how the currencies, especially the Hong Kong dollar, are perceived by international investors or, more specifically, whether they are seen as a safe haven or risky currencies.

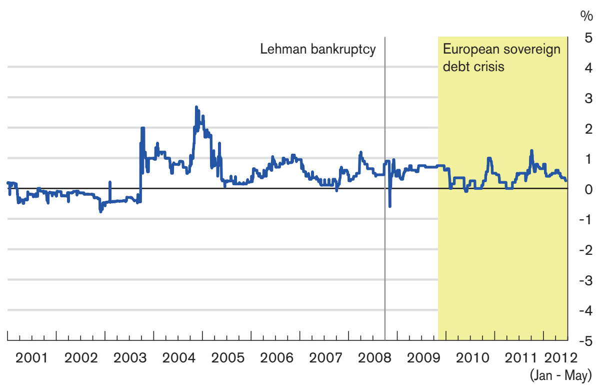
Risk reversal as a yardstick of safehavenness

A currency option is a financial instrument commonly used to hedge against exchange rate risk. A call option gives the right to buy the currency at a certain price and a put option the right to sell. Hence, the buyer of a call bets on the currency to appreciate above the strike price within a certain period, while the seller thinks it is unlikely and accepts a payment for taking the risk. A put option works exactly the other way round. The price difference between the two (call minus put), often known as the risk reversal, measures how market participants are willing to pay more to insure against the crash risk of a currency, a risk of loss resulting from a large and sudden movement of the exchange rate in one direction, than the other of an equal magnitude.[21]

When risk in global financial markets increases or is perceived to be higher, investors flee currencies that are regarded risky to those that are perceived to be safe havens. Therefore, if risk reversal is of any use in assessing such investor behaviour, it should bear a positive relationship with risk aversion if the currency is thought to be safe or a negative relationship if it is considered risky.[22]

Chart B3.1 shows the risk reversal of the Hong Kong dollar. It stayed negative in the early 2000s, attributable to the poor economic performance of Hong Kong (with the SARS epidemic inflicting further pain on the economy in 2003), causing downward expectations on its currency. Towards the end of 2003, the economy rebounded strongly. This, coupled with increasing expectations of a revaluation of the renminbi, led to expectations of an appreciation of the Hong Kong dollar, hence lifting its risk reversal. Since then, the risk reversal has generally remained positive.

Chart B3.1
Risk reversal of the Hong Kong dollar



Source: Bloomberg.

[20] The term "safehavenness" refers to the degree of a financial asset playing the role of a safe haven, or the extent to which a financial asset is regarded by investors as a safe haven.

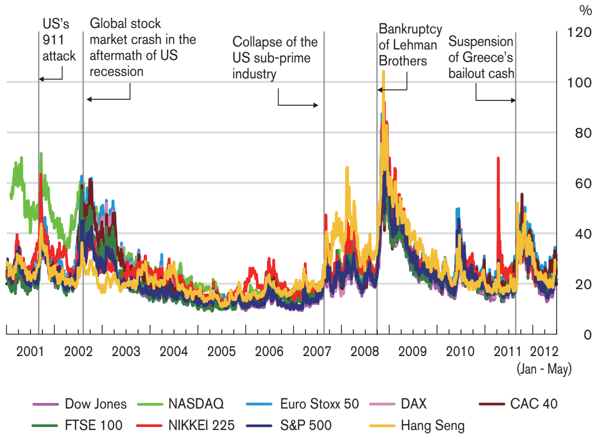
[21] Detailed studies are in M.K. Brunnermeier et al. (2009), "Carry trades and currency crashes", Chapter in *NBER Book NBER Macroeconomics Annual 2008*, Vol. 23; and C.H. Hui and T.K. Chung (2011), "Crash risk of the euro in the sovereign debt crisis of 2009–2010", *Journal of Banking & Finance*, Vol. 35(11), pages 2945 - 2955.

[22] See an example in M. Kohler (2010), "Exchange rates during financial crises", *BIS Quarterly Review*, March, pages 39 - 50.

Estimating safehavenness in crisis times

To find out whether and how well risk reversal can serve as an indicator of safehavenness, we test empirically how investors react to changes in market conditions in terms of how risk reversal behaves in times of crisis or market turbulence. In the test, we examine the relationship between the three-month 25-delta risk reversals of a number of currencies (and gold for reference), and a global fear index from 1 January 2001 to 30 May 2012. The global fear index is proxied by major stock market volatility indices which, often dubbed as investors' fear gauge, are probably the most widely used indicator of risk aversion in financial markets, as they tend to spike in times of crisis (see Chart B3.2).[23]

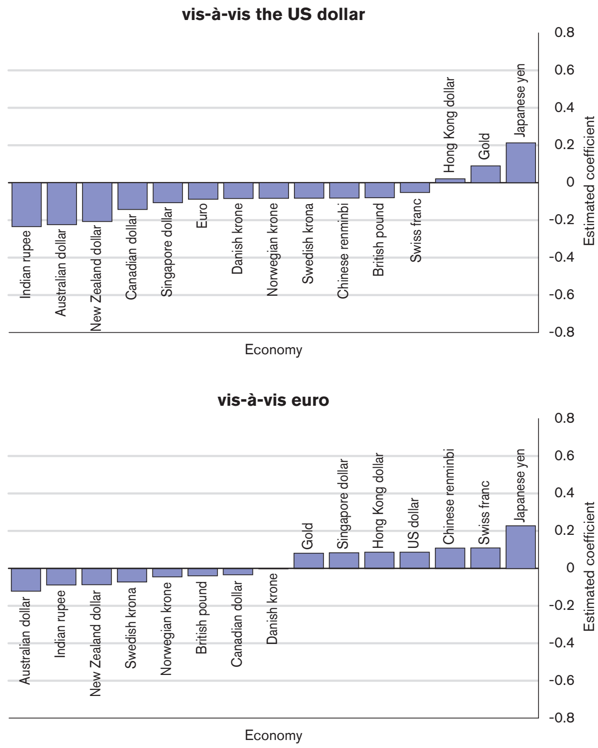
Chart B3.2
Stock market volatility indices



Source: Bloomberg.

The relationship is estimated by means of quantile regression, an econometric technique that allows us to capture the relationship under extreme market conditions, in other words, the tail risk. Estimated coefficients are depicted in Chart B3.3. The upper panel of the chart shows that most of the coefficients of the currency risk reversals vis-à-vis the US dollar are negative, suggesting that these currencies are regarded riskier by dollar-based investors when financial market volatility increases. The exceptions are gold, the Hong Kong dollar and the Japanese yen, reflecting their safe-haven status as perceived by dollar-based investors. In the lower panel, the coefficients of half of the currency risk reversals vis-à-vis the euro are positive, with that of the Japanese yen again being the most significant, followed by those of the Swiss franc, the US dollar, and the Hong Kong dollar. This suggests that in times of market turmoil these currencies are regarded as safe havens by euro-based investors.

Chart B3.3
Responsiveness of risk reversal to the global fear index



Source: HKMA staff estimates.

[23] The global fear index is proxied by the first principal component constructed by nine major stock market volatility indices comprising the S&P 500 (VIX), Dow Jones Industrial Average, NASDAQ, Euro Stoxx 50, DAX, CAC 40, FTSE 100, NIKKEI 225 and Hang Seng index (VHSI).

Conclusion

The finding that the Hong Kong dollar is perceived by euro-based investors as a safe haven relative to most other currencies may be due to the fact that the US dollar is widely looked upon as a safe haven and that international investors tend to use the Hong Kong dollar as a proxy of the US dollar, which may in turn be attributable to the Linked Exchange Rate system. In addition, during the US sub-prime crisis, the Hong Kong banking system was judged by dollar-based investors to be safer than its US counterpart in terms of lower default risk.[24] Consistent with the above analysis, Hong Kong, notwithstanding its openness, has not experienced large capital outflows despite a series of international financial crises in recent years.

24 See C.H. Hui et al. (2011), "Funding liquidity risk and deviations from interest-rate parity during the financial crisis of 2007-2009", *International Journal of Finance and Economics*, Vol. 16, pages 307 - 323.

Box 4
The distribution of eurodollar deposits: pointers for offshore renminbi business

Hong Kong has rapidly developed as the global hub for offshore renminbi business. But this rapid development raises a number of questions, not the least being, how will its future evolve? And, what determines the relative competitive advantages of different offshore banking centres? As the history of renminbi internationalisation is still short, we draw insights from the eurodollar market to answer these questions.

By way of background, according to BIS data, offshore foreign currency deposits [25] totalled US$17.3 trillion at the end of March 2012. The US dollar accounted for over half (53.6%) of these deposits. Nearly one third were placed in the UK (Table B4.A). Other major destinations are developed markets in Western Europe and the Asia-Pacific region.

Table B4.A
Major destinations of offshore deposits denominated in foreign currencies

	Mar 2012 US$ bn	Share (%)	Annual Growth (%) Dec 2000 – Mar 2012
All countries	17,290.7	100	8.6
UK	5,405.8	31.3	10.0
Euro area	3,408.2	19.7	6.2
Cayman Islands	1,502.2	8.7	6.4
Japan	932.4	5.4	9.6
Singapore	932.1	5.4	7.2
Switzerland	667.8	3.9	1.0
Hong Kong	618.6	3.6	7.3
Bahamas	588.8	3.4	6.7
Australia	546.3	3.2	16.9
Sweden	459.3	2.7	17.0

Note: Figures for euro area only cover 13 BIS-reporting euro area members, while the data for Estonia, Malta, Slovakia and Slovenia are not covered.

Source: BIS.

Determinants of the distribution of eurodollar deposits

To learn from the eurodollar market, our statistical analysis is focused on the determinants of the worldwide distribution of eurodollar deposits.

In principle, the time zone should be an important factor in affecting the location of offshore deposits. For example, home bias means US residents tend to place US dollar deposits closer to the US. In addition, markets of similar time zones usually have overlapping trading hours, thus facilitating cross-market financial transactions. However, country risk diversification suggests that considerable amounts of US dollar deposits could be held in regions far away from the US.[26]

We also consider GDP share, since a larger economy tends to receive more deposits. An economy's share of US total trade is also included to capture its economic linkage with the US. Other determinants (institutional quality, portfolio inflows and foreign exchange turnover) are location-specific, measuring various aspects of the deposit recipient country that may attract eurodollar deposits.

Key results of statistical analysis

A cross-country panel data model is used to analyse the determinants of the distribution of eurodollar deposits. The sample consists of 29 BIS-reporting economies (excluding the US) for the period 1995-2010.[27] We found that time zone is one of the most important determinants (Table B4.B). Specifically, as the number of time zones from New York City of these centres increases, their market shares of eurodollar deposits decrease, and vice versa. In other words, the findings suggest that the benefits of similar

[25] While the statistical analysis reported here uses data of offshore US dollar deposits of individual countries, these data are not disclosed here since the BIS classifies them as "restricted", which are only for the internal use of central banks. However, since the US dollar is the dominant currency, the pattern of foreign currency deposits still provides a useful backdrop.

[26] Note that in some financial centres, notably those in emerging market countries, eurodollar deposits are largely held by non-US residents.

[27] For details, see D. Leung and J. Wong (2012), "Determinants of the distribution of eurodollar deposits in offshore financial centres", *HKMA Research Note 01/2012*.

time zones (for example, overlapping trading hours) outweigh those of far-away time zones.

Table B4.B
Major results of the econometric analysis

	Dependent variable: market share of external US dollar liabilities of banks from foreign entities		
Explanatory variables	All sectors	Banking sector	Non-bank sector
Time zone	-0.2278 **	-0.2204 **	-0.2082 **
GDP share	0.2221 **	0.4959 **	1.0120 **
Trade with the US	0.2548 **	0.2451 **	0.2241 **
Legal and regulatory quality	0.1201 **	0.1316 **	0.1221 **
Portfolio investment inflows	0.2249 **	0.3886 **	0.1060 *
FX market turnover	0.3192 **	0.1578 **	0.3627 **
Constant	0.9691	0.5460	0.4021
Adjusted R squared	0.4338	0.3661	0.6371
Number of observations	766	766	766

* Statistically significant at 90%.
** Statistically significant at 95%.
Source: HKMA staff estimates.

The share of foreign exchange market turnover is found to be another important determinant. Better quality of the legal and regulatory framework and greater portfolio inflows also result in larger eurodollar deposit market shares. In addition, trade linkage between the US and the offshore financial centre in question is important.

Conclusion

Our findings help us understand the distribution of offshore deposits. In the case of the eurodollar market, London and the Cayman Islands are the two largest destinations of these deposits. We can interpret that what works well for the Cayman Islands is being in the same time zone as New York City, and what works well for London is being the most important foreign exchange market.

Applying this to Hong Kong, its competitive position as an offshore renminbi centre is strengthened by being in the same time zone as the Mainland, speaking the same language, and having intimate knowledge of and maintaining extensive connections with the Mainland. But Hong Kong's ability to attract renminbi liquidity also hinges on its ability to consolidate its position as a business centre for global financial institutions across a wide range of time zones and for agglomeration of transactions in other major currencies. In this regard, the recent extension of the operating hours of the renminbi Real Time Gross Settlement (RTGS) system[28] is significant, since it enables clients in Europe to use the Hong Kong platform to settle renminbi transactions during most of the trading day. It also covers part of the morning session of New York City. Also, the launch of the cross-border collateral management service in June 2012 is crucial since it facilitates cross-border renminbi funding activities.[29] Meanwhile, the strong economic links between Hong Kong and the Mainland will continue to benefit the development of renminbi business in Hong Kong.

[28] Starting from 25 June 2012, the daily operating hours of the renminbi RTGS system have been extended by five hours to 8:30 - 23:30 (Hong Kong Time).

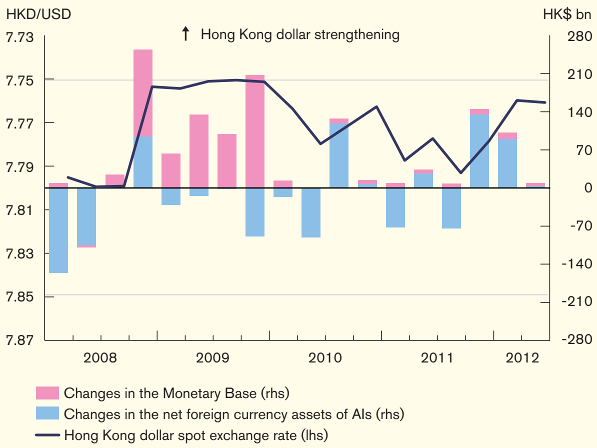
[29] The new service enables international financial institutions to use securities held with Euroclear Bank or J.P. Morgan as collateral in triparty repo transactions with members of the HKMA's Central Moneymarkets Unit to access liquidity from Hong Kong, in particular the Hong Kong dollar and offshore renminbi. For details, see the Tripartite Media Release issued by the HKMA, Euroclear Bank and J.P. Morgan on 20 June 2012.

4.3 Capital flows

Demand for Hong Kong dollar assets

Demand for the Hong Kong dollar increased in 2012 Q1, according to both price and quantity indicators. In particular, the Hong Kong dollar spot exchange rate against the US dollar strengthened to an average of 7.7598 in Q1 from 7.7785 in 2011 Q4 (Chart 4.16). For the quarter as a whole, the net foreign currency assets of the authorized institutions (AIs) also expanded, signalling some inflows of funds in the non-bank private sector.[30] Hong Kong dollar deposits rose by around HK$80 billion despite stagnant outstanding Hong Kong dollar loans. In any event, the Hong Kong dollar buying pressure was modest as the strong-side Convertibility Undertaking was not triggered and the spot exchange rate traded within a very narrow range between 7.753 and 7.770.

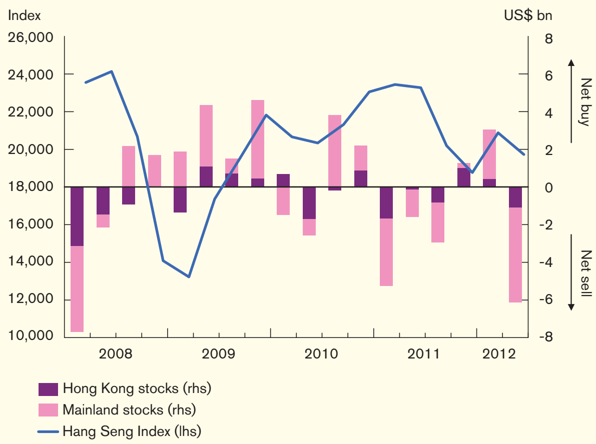
Chart 4.16
Fund flow indicators (quarterly)



Note: A positive change in the Monetary Base or the net foreign currency assets of AIs signals inflows.
Source: HKMA.

The stronger demand for the Hong Kong dollar emerged in Q1 as market sentiment and risk appetite improved amid a respite from the euro area crisis, an appreciation in the regional currencies and a sharp rebound in the local stock market. In this connection, part of the Hong Kong dollar demands was equity-related. A survey of fund managers indicated some net foreign buying of Hong Kong equities and Mainland-related stocks including H-shares in Q1 (Chart 4.17). By contrast, fund-raising activity in the stock market was in the doldrums, failing to give extra impetus to the Hong Kong dollar demand.

Chart 4.17
Market survey of equity-related flows

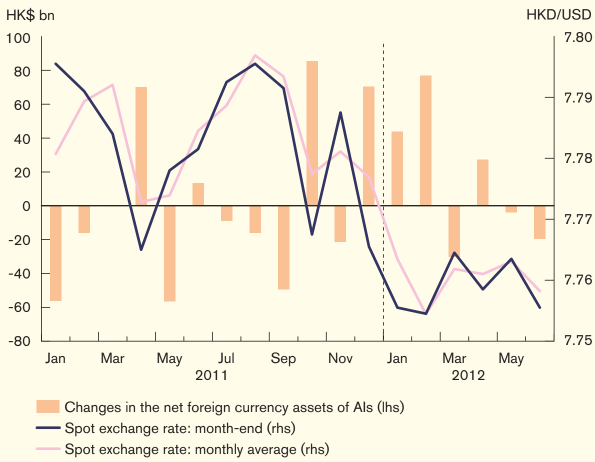


Note: "Mainland stocks" include H-shares, red-chips listed on the Hong Kong Stock Exchange and those shares listed on the Mainland stock markets.
Sources: CEIC and EPFR Global.

The second quarter of 2012 saw fluctuations in the demand for the Hong Kong dollar, characterised by some buying pressure in April, but mixed patterns in May and June (Chart 4.18). For the quarter as a whole, the Hong Kong dollar was not under any substantial pressure. The Hong Kong dollar spot exchange rate against the US dollar averaged 7.76 in Q2, little changed from Q1. The net foreign currency assets of the AIs also did not show any significant quarterly change.

30 It should be noted that changes in the net foreign currency assets of the AIs, or the equivalent of their net Hong Kong dollar liabilities, include the effects of valuation changes like price and exchange-rate changes, and, therefore, are only a proxy for net Hong Kong dollar fund flows.

Chart 4.18
Fund flow indicators (monthly)



Note: A positive change in the net foreign currency assets of AIs signals inflows.
Source: HKMA.

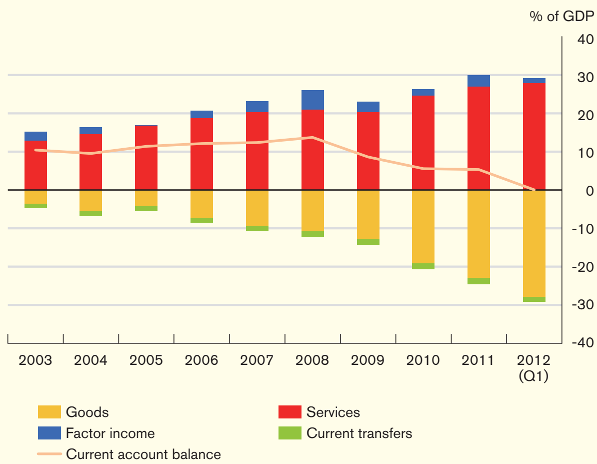
The monthly variations in the Hong Kong dollar demand between April and June were partly driven by shifts in risk sentiment and the evolving global outlook. Reportedly reflecting some risk-on sentiment, the Hong Kong dollar spot exchange rate strengthened a little in April, but thereafter softened through mid-May on concerns about the flare-up of the euro area crisis and early signs of more fragile US and Mainland growth. While the decline in the net foreign currency assets of the AIs in May and June pointed to some Hong Kong dollar selling pressure, the spot exchange rate remained firm, supported by a number of factors including real commercial demands derived from dividend payment needs by some locally-listed Mainland companies.

Balance of Payments and cross-border capital flows

The latest Balance of Payments statistics indicated that reserve assets expanded at a robust pace in 2012 Q1, by HK$48.2 billion (10% of GDP) compared with an average quarterly increase of HK$27.9 billion (6% of GDP) in 2011. The expansion was caused by purchases of foreign currencies with Hong Kong dollars, incomes from foreign currency assets and increases in Certificates of Indebtedness. Recent HKMA data revealed that foreign currency reserve assets of the Exchange Fund grew further in Q2.

Alongside a slight year-on-year deterioration in the terms of trade, the first quarter of 2012 recorded a contraction in the current account surplus, broadly continuing its narrowing trend since 2009 (Chart 4.19). The services trade surplus, although expanding, was only slightly larger than the deficit in the trade of goods account in Q1. The current account surplus shrank to a record low of HK$57 million (0.01% of GDP). This was mainly due to the combined result of shrinking external demand and resilient domestic spending. National income data pointed to further deterioration in the current account in Q2.

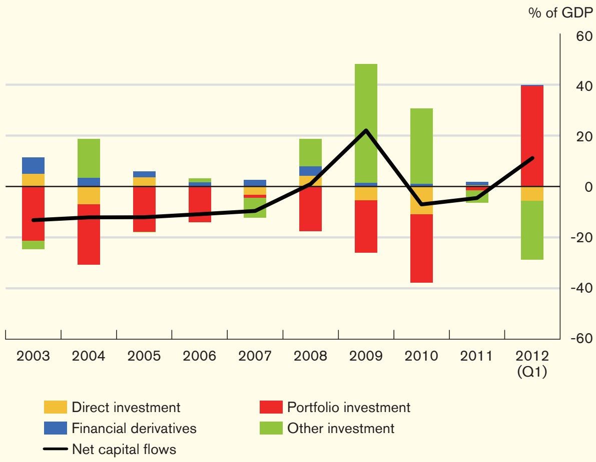
Chart 4.19
Current account surplus



Source: C&SD.

There were some net private capital inflows in Q1, apparently reversing the pattern of net outflows in 2010 and 2011 (Chart 4.20). Indeed, HK$52.7 billion (11% of GDP) of net private capital inflow was recorded, with net portfolio investment inflows exceeding net direct investment outflows and net other outflows relating to loans and deposits.

Chart 4.20
Cross-border capital flows



Note: A positive value indicates inflows.
Source: C&SD.

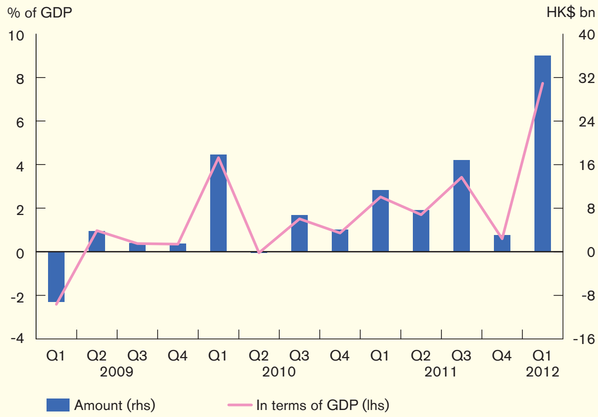
The net portfolio investment inflows in Q1 were broad-based and sizeable (Table 4.A). Non-residents purchased more Hong Kong equities, amid stronger demand for the Hong Kong dollar and the local stock market rally. Their holdings of Hong Kong debt securities also increased notably, in part related to local enterprises turning more to overseas bond markets to satisfy longer-term funding needs (Chart 4.21). Local residents reduced their holdings of non-resident equities. However, their holdings of non-resident debt securities picked up.

Table 4.A
Cross-border portfolio investment flows

	2011				2012
(HK$ bn)	Q1	Q2	Q3	Q4	Q1
By Hong Kong residents					
Equity securities	-51.5	-96.0	-154.9	21.7	84.1
Debt securities	60.3	-11.6	25.5	63.2	-8.1
By non-residents					
Equity securities	-2.5	37.2	18.2	23.9	74.4
Debt securities	11.4	7.6	16.8	3.0	36.1

Note: A positive value indicates capital inflows.
Source: C&SD.

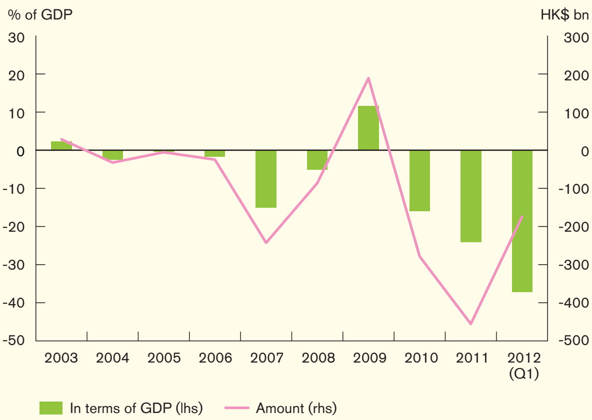
Chart 4.21
Debt portfolio investments by non-residents



Note: A positive value indicates inflows.
Source: C&SD.

Part of the net investment outflows relating to deposits and loans in the first quarter were attributable to deposit and loan outflows by Hong Kong residents. As in 2010 and 2011, there were also considerable outflows of loans extended by local banks to non-residents (Chart 4.22). Some of these loan outflows were Mainland-related, supported by low US dollar and Hong Kong dollar interest rates.

Chart 4.22
Loans extended by local banks to non-residents



Note: A negative value indicates outflows.
Source: C&SD.

Outlook for capital flows

Recurrent concerns about the euro area crisis and heightened macro-financial uncertainties in the advanced economies and Mainland China have subjected financial market conditions to substantial volatility and will continue to do so for some time to come. On the upside, further monetary easing in the advanced economies or other successful crisis-fighting measures in Europe could induce capital inflows in the region. The ECB's Longer-Term Refinancing Operations earlier this year apparently helped lift net equity-related inflows into emerging market economies and this once again illustrates the sensitivity of fund flows and exchange rate movements in the region to global financial conditions and investors' risk appetite. On the downside, further deterioration in the European sovereign debt crisis or a synchronised downturn across the globe could undermine investor sentiment and induce large capital outflows from the region.

Overall, the direction and size of fund flows could be volatile for the remainder of 2012. Nevertheless, net fund flow pressures are not expected to be large. Box 3 analyses the safe-havenness of currencies and finds that the Hong Kong dollar is generally perceived as a safe haven relative to most other currencies, as evidenced by the risk reversal of the currency in times of financial turbulence.

Asset markets

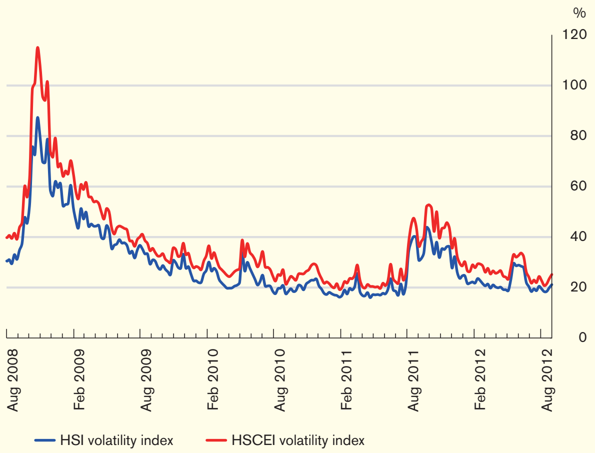
Local equity prices came under pressure as the European sovereign debt crisis intensified and the global economy slowed further. However, the domestic debt market continued to grow. The issuance of offshore renminbi debt securities increased at a brisk pace, with renminbi certificates of deposit rising sharply in response to increasing demand for short-term liquidity.

Property market activities revived notably and prices have risen sharply. However, with continuing low interest rates and tight supply conditions, the risks and incentives to take on excessive leverage still exist, and this requires vigilance from the public and warrants continued supervisory restraint on bank credit.

4.4 Equity market

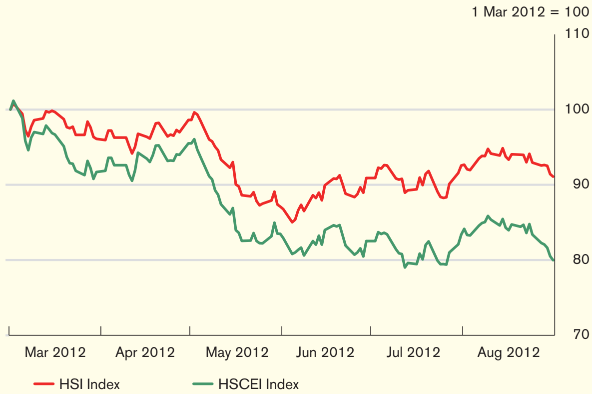
The Hong Kong equity market came under pressure amid the deteriorating external environment following the intensification of the European sovereign debt crisis, slowing growth in the US and weaker than expected growth on the Mainland. Problems in the European banking system also showed no signs of abating. The combination of financial and economic woes led to a significant increase in risk aversion in the local equity market, prompting sizable falls in equity prices. The implied volatilities of the Hang Seng Index (HSI) and Hang Seng China Enterprises Index (HSCEI) surged to a six-month high in May (Chart 4.23), with the HSI and HSCEI declining by 10.1% and 21.5% respectively in the past six months, and the average daily turnover dwindling to the lowest level since 2008. Given the concerns over the economic slowdown on the Mainland, the divergence between the HSI and HSCEI continued to widen (Chart 4.24).

Chart 4.23
Weekly volatility indices of the Hang Seng Index and Hang Seng China Enterprises Index



Sources: Bloomberg and HKMA staff estimates.

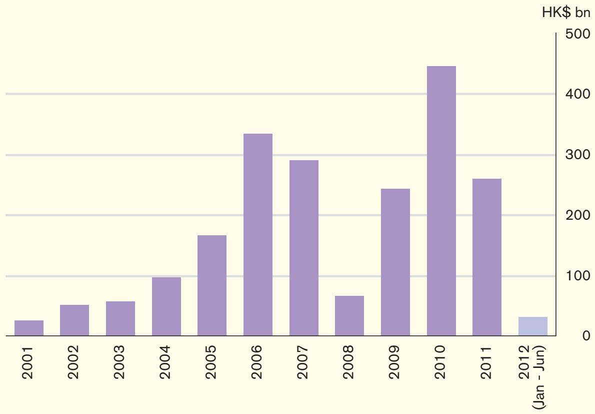
Chart 4.24
The Hang Seng Index and Hang Seng China Enterprises Index



Source: Bloomberg.

Reflecting weaknesses in the external environment and increasingly volatile market conditions, fund-raising activities in the Hong Kong initial public offerings (IPO) market slowed substantially. Mainland enterprises were traditionally the largest source of Hong Kong IPOs. And, as some Hong Kong-listed Mainland private enterprises encountered auditing problems, investors have become cautious about the quality of the Mainland private enterprises in general. Against this backdrop, the IPO market in Hong Kong recorded its worst half-yearly performance since 2009 with just HK$30.8 billion raised in the first half of 2012, an 82.3% decline compared with the same period in 2011 (Chart 4.25).

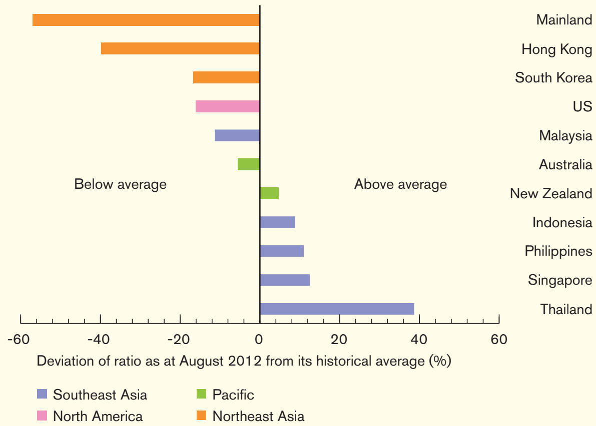
Chart 4.25
The IPO market in Hong Kong



Source: CEIC.

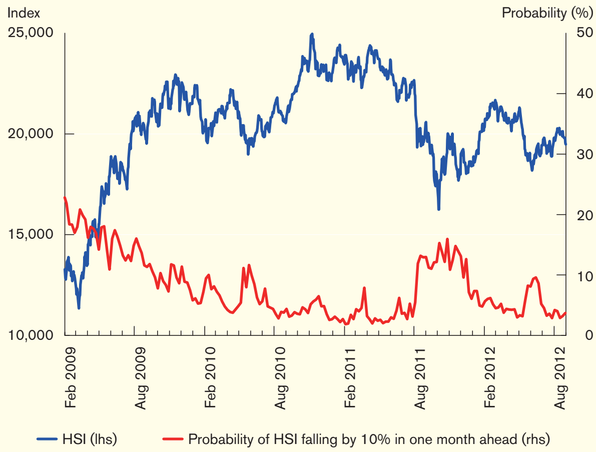
Looking ahead, the local equity market will continue to be affected significantly by external market conditions. Given the current price-earnings ratios of stocks in Hong Kong and the Mainland (Charts 4.26 and 4.27), investors may arguably be more receptive to potential positive developments, such as the implementation of more pro-growth measures by Mainland authorities and effective measures by the ECB and the US Federal Reserve. However, in view of increased uncertainties over the global outlook — especially as to how, and how well, policymakers can deliver their balancing act in the US, Europe and the Mainland — the local equity market is likely to remain volatile in the second half of 2012.

Chart 4.26
Price-earnings ratios of US and Asian Pacific markets (excluding Japan)



Sources: Bloomberg and HKMA staff estimates.

Chart 4.27
Hang Seng Index and its option-implied probability of falling by 10% in one-month

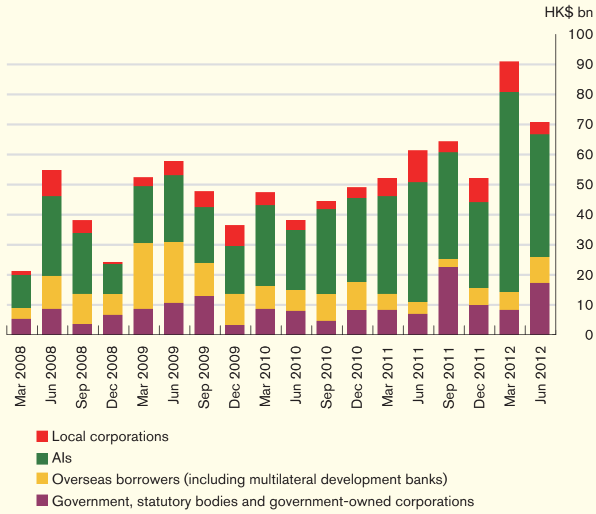


Sources: Bloomberg and HKMA staff estimates.

4.5 Debt market

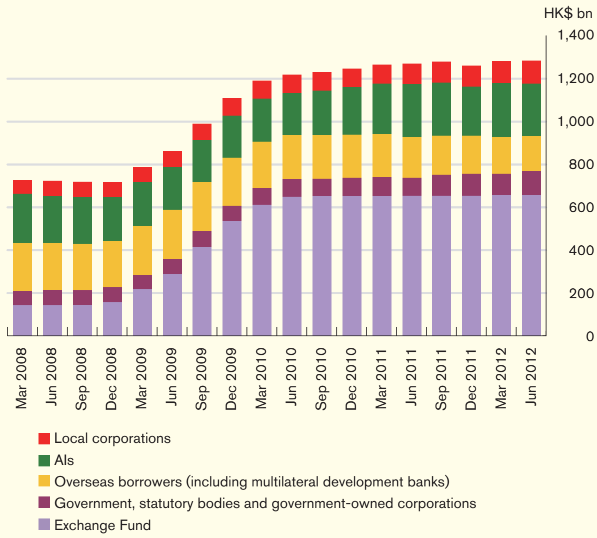
The Hong Kong dollar debt market continued to be resilient despite the volatile and uncertain external environment. In the first half of 2012, new debt issuance increased by 5.3% year on year to HK$1,079.9 billion. The Exchange Fund remained the key issuer, followed by AIs and the Government (Chart 4.28).[31] This growth more than compensated for the maturing debt, and the total outstanding amount of Hong Kong dollar debt increased, albeit marginally, by 1.0% year on year to a record HK$1,282.1 billion at the end of June (Chart 4.29).[32] Overseas borrowers, who issued more new debt, however, saw their outstanding debt fall by 15.1% year on year. This reflects that overseas borrowers continued to face difficulties in raising funds in international capital markets, including Hong Kong, amid bleak global economic conditions and the deterioration of the European sovereign debt crisis. The weighted average tenor of private-sector issuances declined from three years to 2.5 years between 2012 Q1 and Q2, indicating conditions were also more favourable for raising shorter-term funds.

Chart 4.28
New issuance of non-Exchange Fund Bills and Notes Hong Kong dollar debt



Source: HKMA.

Chart 4.29
Outstanding Hong Kong dollar debt



Source: HKMA.

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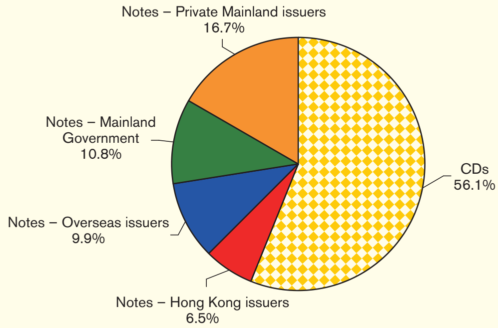
31 The Exchange Fund accounted for 85.0% of new issuances. Debt issued by AIs and overseas borrowers jumped by 49.1% and 53.8% to HK$107.7 billion and HK$14.4 billion respectively. The Government issued HK$9.5 billion worth of bonds to institutional investors under the Institutional Bond Issuance Programme and sold another HK$10.0 billion worth of three-year inflation-linked bonds to retail investors in June.

32 This was equivalent to 30.9% of the Hong Kong dollar M3 or 25.4% of Hong Kong dollar denominated assets of the entire banking sector.

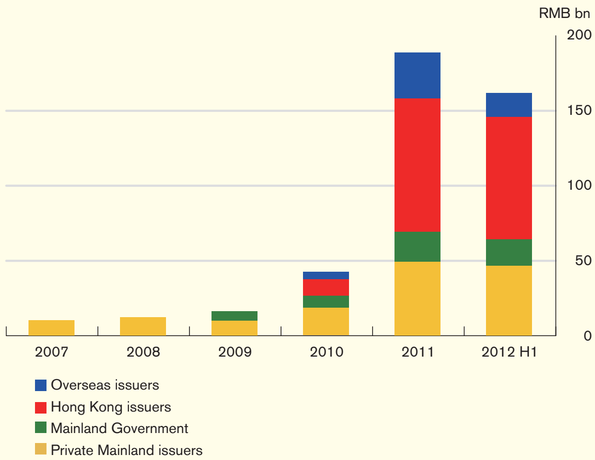
Issuances in the Hong Kong offshore renminbi debt securities market remained vibrant.[33] A total of RMB161.3 billion worth of debt securities were issued in the first half, almost double the RMB85.2 billion recorded during the same period in 2011 (Chart 4.30). The range of issuers continued to increase further. While Mainland issuers accounted for the majority of the issues prior to 2011, Hong Kong issuers accounted for almost half of the new issuances in 2012 H1.[34] Short-term CDs issued by AIs formed a majority of these new issuances (Chart 4.31), reflecting increasing demand for short-term liquidity.

Chart 4.31
Distribution of new issuance of offshore renminbi debt securities by nationality in 2012 H1



Sources: Newswires and HKMA staff estimates.

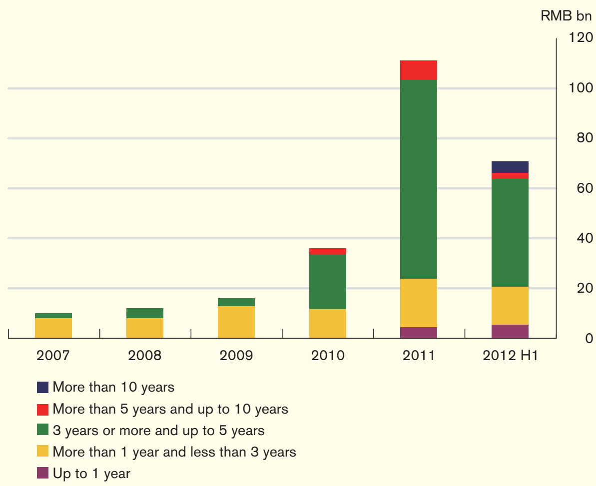
Chart 4.30
New issuance of offshore renminbi debt securities



Sources: Newswires and HKMA staff estimates.

The offshore renminbi debt securities market is also developing as a platform for raising long-term funds. Excluding CD issuances, the weighted average maturity of newly-issued debt securities increased from 2.2 years to 3.8 years between 2007 and 2012 H1 (Chart 4.32). The lengthening of maturities is, to a large extent, attributable to the issuance of longer-term notes — often with a maturity of 10 years or more — by the Mainland Government and state-owned banks. These issuances have provided useful benchmarks for corporate issuers to price their long-term issuances. Separately, issuances by overseas issuers grew by 12.3% year on year, reflecting sustained international interest in raising renminbi funds in Hong Kong.

Chart 4.32
New issuance of non-CD offshore renminbi debt securities by tenor



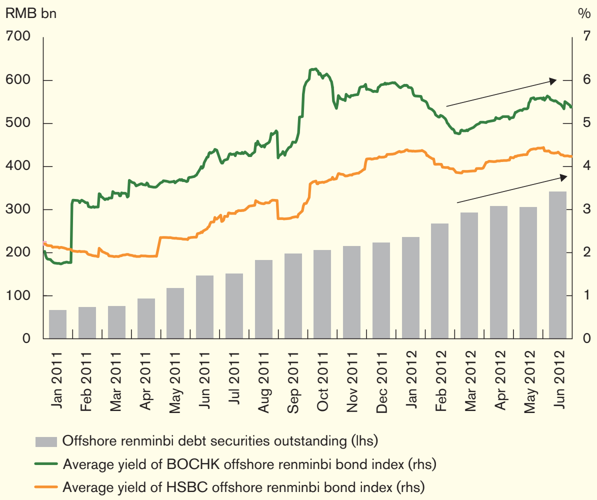
Sources: Newswires and HKMA staff estimates.

33 Debt securities include both medium and long-term notes, CDs and commercial papers.

34 Hong Kong issuers include Hong Kong Government agencies, government-owned corporations, and financial and non-financial corporations with predominant operations in Hong Kong. Private Mainland issuers refer to both financial and non-financial corporations with predominant operations in Mainland China. Overseas issuers include multilateral development banks, financial and non-financial corporations with predominant operations outside Hong Kong and Mainland China. Each issuer's predominant area of operation is determined based on the location of its headquarters.

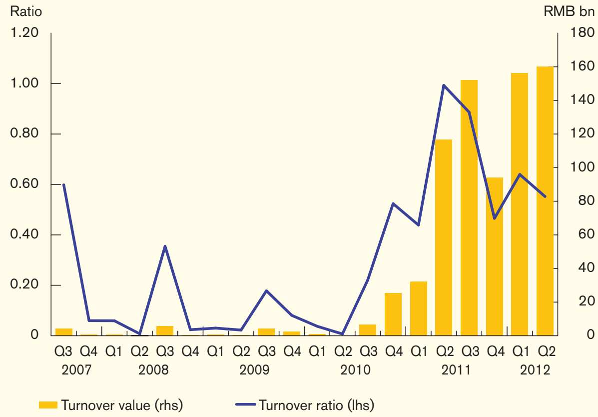
With the rise in issuances, the outstanding amount of renminbi debt securities increased to a record RMB342.6 billion by the end of June 2012 (Chart 4.33). This has, in part, led to increasing costs of borrowing for offshore renminbi bond issuers as competition for funds grew and investors demanded higher yields (Chart 4.33). At the same time, the secondary market continued to develop, with total turnover reversing the earlier declines registered in 2011 (Chart 4.34). Market liquidity, measured by the turnover ratio, tightened in the past year, but this may prove to be an aberration given the large volume of newly-issued debt.[35]

Chart 4.33
Offshore renminbi debt securities outstanding and offshore renminbi bond yield



Sources: Bloomberg, Newswires and HKMA staff estimates.

Chart 4.34
Turnover in the secondary market



Note: The turnover values and ratios calculated pertain only to debt securities lodged and traded through the HKMA's Central Moneymarkets Unit. While this provides a good proxy for the trends emerging in the market, it does not represent the secondary market in its entirety.

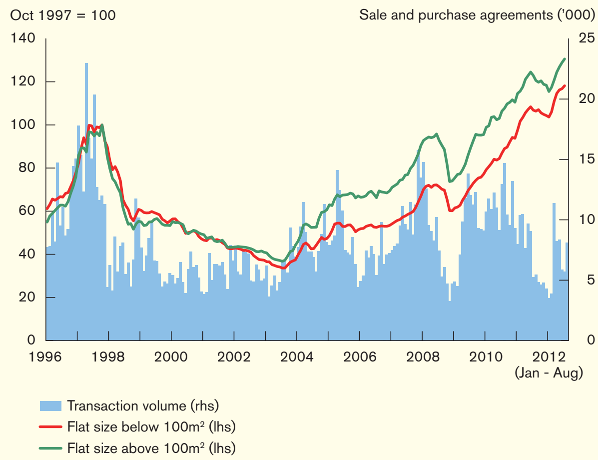
Source: HKMA staff estimates.

4.6 Property markets

Residential property market

Following some modest consolidation from mid-2011 to early this year, residential property market activities have strengthened, in part owing to improving sentiment, rising income, a slight easing in mortgage rates, and expectation of continued tightness in supply. Flat prices on average rose by 13.1% to record-high levels in the first seven months (Chart 4.35). According to

Chart 4.35
Residential property prices and transaction volumes

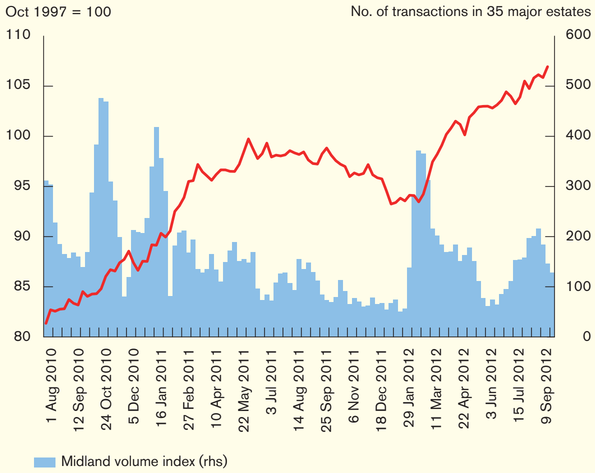


Sources: R&VD and Land Registry.

[35] The turnover ratio is calculated by dividing total turnover in a quarter by the average amount of debt securities outstanding in the quarter.

anecdotal transaction reports, flat prices continued to surge more recently (Chart 4.36). This time, however, flat prices recorded stronger increases of 13.2% in the first seven months in the small and medium-sized segment (flats with a saleable area below 100 square metres), than in the upper-middle and luxury segment (over 100 square metres) of 10.3%.

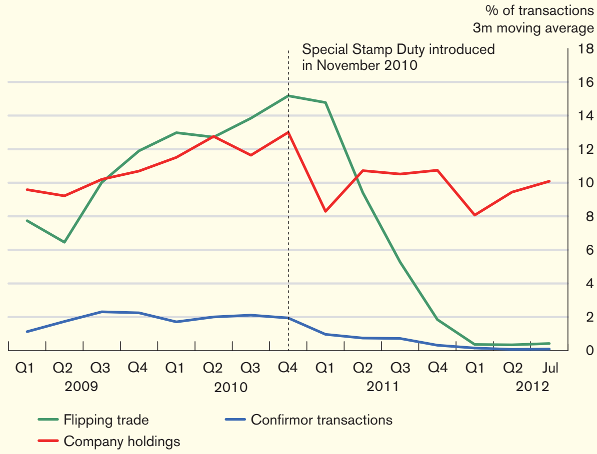
Chart 4.36
Residential property prices and transaction volumes estimated by realties



Sources: Midland Realty and Centaline Property Agency Limited.

On the transaction side, about 41,000 sale and purchase agreements were lodged with the Land Registry in the first half of 2012, representing a 41% increase from the low base in the preceding half-year period, but a 25% decline from a year ago. As such, the transaction volume remained below the normal activity level by historical standards, but a stronger pick up in activity appeared to take hold in July and August, according to provisional records. On the other hand, with the Special Stamp Duty in place, speculative activities seem to have remained generally quiet according to some ex-post indicators. For instance, both confirmor transactions and flipping trade (selling within 12 months of holding) have hovered at extraordinarily low levels. However, company holdings have increased moderately in recent months, signalling stronger investment demand (whether as short or long-term plans), warranting closer monitoring in the period ahead (Chart 4.37).

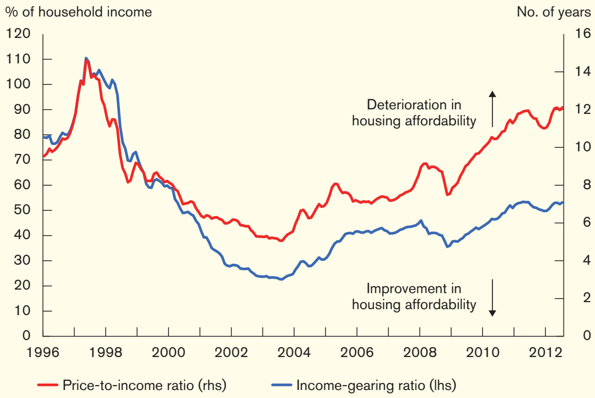
Chart 4.37
Confirmor transactions, flipping trade and company holdings



Source: Centaline Property Agency Limited.

Housing affordability deteriorated further as income growth failed to catch up with that of flat prices. Relevant indicators, including the income-gearing ratio and price-to-income ratio, all rose to recent highs and were well above their 10-year long-term average levels (Chart 4.38).[36] Regarding tenure choice, the rise in the cost of owning a flat continued to outpace that of renting one. As a result, the buy-rent gap has recently climbed to a 4½-year high.[37] Meanwhile, the average flat rental yield fluctuated around record lows of 3%.

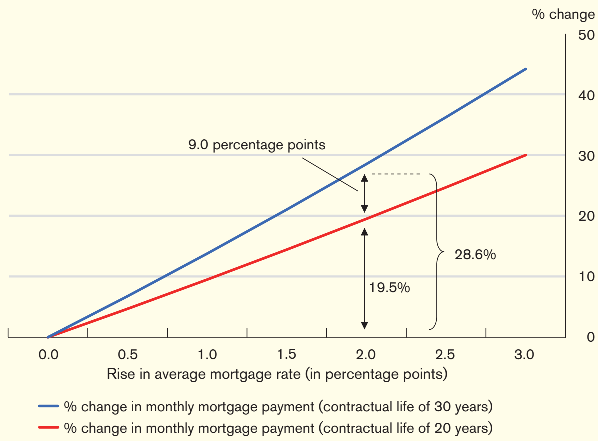
Chart 4.38
Indicators of housing affordability



Sources: R&VD, C&SD and HKMA staff estimates.

Growth in mortgage loans has visibly slowed, recording only a 2.5% increase during the first half of 2012. There are, however, signs of a pick up, according to recent mortgage application statistics. In the face of rising flat prices and the low interest rate environment, mortgagors apparently have lengthened the mortgage contractual life, from an average of 20 years in 2007 to nearly 25 years in 2012 Q2. However, the longer amortisation period increases the interest rate risk. For example, in a stressed scenario of a two-percentage-point rise in the interest rate, the monthly mortgage payment could increase by 20% under a 20-year mortgage, but by almost 30% under a 30-year mortgage (Chart 4.39).

Chart 4.39
Sensitivity analysis of mortgage payment in the event of interest rate risks



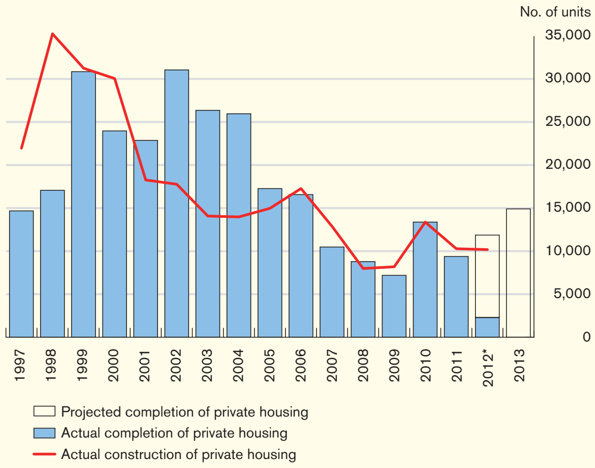
Note: The loan-to-value ratio is assumed to be 70%.
Source: HKMA staff estimates.

The near-term outlook for the residential property market is uncertain, as it is caught in a tug-of-war between two opposing forces. On the one hand, upward pressures on housing prices could persist with continued tight supply conditions (Chart 4.40) and low interest rates. On the other hand, a weaker global outlook would weigh down housing prices. Income growth may also moderate along with the slowing economy. A worsening of the sovereign debt and banking crisis in the euro area could even reverse the upward trend in an abrupt manner. In view of this, the HKMA introduced on 14 September a new round of measures to further strenghten risk management in property mortgage lending business, including tightened underwriting criteria for loans to borrowers with multiple property mortgages and a newly introduced ceiling for loan tenors (Table 4.B).

36 The income-gearing ratio compares the amount of *mortgage payment* for a typical flat of 50 square metres (under a 20-year mortgage scheme with a 70% loan-to-value ratio) to the median income of households living in private housing. Alternately, the price-to-income ratio measures the *average price* of a typical 50 square-metre flat relative to the median income of households living in private housing.

37 The buy-rent gap estimates the cost of owner-occupied housing (under a 20-year mortgage scheme with a 70% loan-to-value ratio) relative to rentals.

Chart 4.40
Construction and completion of private residential units



* Actual completion and construction figures for 2012 are up to the end of June only.
Sources: Transport and Housing Bureau and R&VD.

Table 4.B
Highlights of the fifth round of prudential supervisory measures for mortgage lending announced on 14 September 2012

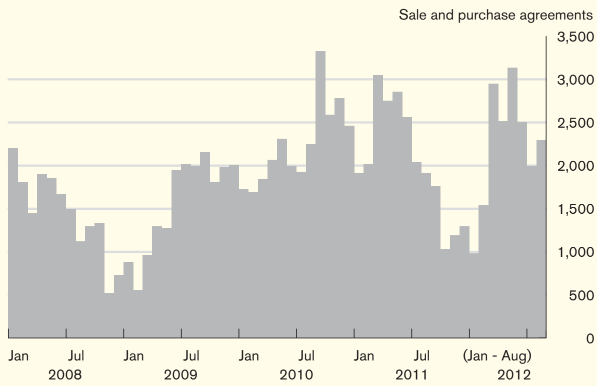
1. For all borrowers, the maximum loan tenor is limited to 30 years.
2. For borrowers with multiple properties under mortgage:
   (a) The debt servicing ratio (DSR) limit is lowered by 10 percentage points to 40%, while the maximum stressed DSR is lowered to 50%;
   (b) The maximum loan-to-value (LTV) ratio is lowered by 10 percentage points to 30% if mortgage loans are assessed based on borrowers' net worth; and
   (c) The applicable LTV ratio is lowered by 20 percentage points if borrowers' principal income is derived from outside Hong Kong.

Source: HKMA.

Commercial and industrial property markets

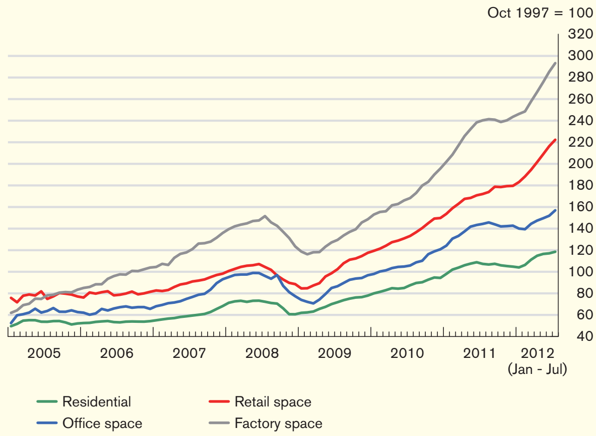
Non-residential markets also revived this year, with trading activities turning buoyant and property prices rising markedly. Overall, 13,600 sale and purchase agreements were registered in the first half of 2012, a 48% increase from the preceding half-year period and well above the long-term average activity level (Chart 4.41). Speculative activities also remained notable by historical standards. Prices for flatted factories and retail space, already at relatively high levels, climbed further by 20 - 24% in the first seven months (Chart 4.42), while prices for office space increased at a relatively slower pace of 10%. In comparison, increases in rentals for non-residential properties ranged from 3 - 10%. As a result, rental yields were around record-low levels. Looking ahead, despite support from the low interest rate environment, the rapid upsurge in prices and rentals could be hampered by the weaker global economic outlook and business prospects.

Chart 4.41
Transaction volume of non-residential properties



Source: Land Registry.

Chart 4.42
Price indices by property type



Source: R&VD.